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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

RILEY, MARCUS T

ART UNIT

PAPER NUMBER

2625

MAIL DATE

DELIVERY MODE

07/08/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/725,026

Applicant(s)

OHSHIMA, KEITA

Examiner

MARCUS T. RILEY

Art Unit

2625

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 2-4 & 7-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1, 5, 6 and 16-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI/08)
Paper No(s)/Mail Date 12/27/2007; 06/23/2008
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This office action is responsive to applicant's remarks received on April 10, 2008. **Claims 1, 5 & 6** and newly added **claims 16-26** are pending.

Response to Arguments

2. Applicant's arguments with respect to original **claims 1-15** have been considered but are moot in view of the new ground(s) of rejection. **Claims 1, 5 & 6** and newly added **claims 16-26** filed on April 10, 2008 have been fully considered but they are not persuasive. **Claims 2-4 & 7-15** have been cancelled.

Claim Rejections - 35 USC § 101

(The previous claim rejection is withdrawn in light of the applicant's amendments.)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1, 6, 17, 21, 25 & 26** rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (US 6,727,999 B1 hereinafter, Takahashi '999) in combination with Takahashi (US 6,985,245 B1 hereinafter, Takahashi '245).

Regarding claim 1; Takahashi '999 discloses a print managing apparatus which is connected to a plurality of printing apparatuses including a monochromatic printing apparatus via a communication medium, comprising (*"Further, MFP's (Multi Functional Peripheral) 104 and 105 are connected to the network 101. Numeral 104 is a color MFP capable of full color scanning, printing and the like. Numeral 105 is a black and white MFP, performing monochromatic scanning, printing and the like. In addition, although not shown, machines other than the above-mentioned MFP's such as scanners, printers, faxes or the like are connected to the network 101."* column 3, lines 9-16); (*"As a mechanism to inform successively the computers 102 and 103 side, on the information and the status of the MFP's 104 and 105, the MFP's 104 and 105 respectively are provided with communication means which allows data exchange with the computers 102 and 103 through the network 101. Moreover, the computers 102 and 103 have utility softwares which function by receiving the information such that the MFP's 104 and 105 can be managed by the computers 102 and 103."* column 3, lines 23-31): read means for reading a job ticket which describes print instruction information for a print document to be printed (*"The utility software is a program which can be read by the computers 103 and 102 and is recorded on hard disks, CD-ROMs or floppy disks, accessible to the computers 103 and 102. Numeral 21502 is called a title bar and is used to show the level or the title of the current window. Numeral 21503 is called a tab and is arranged according to its type, allowing to watch necessary information or select necessary information. Numeral 21504 is a job ticket number*

and the status of the series of operations to be started, the progress of its own job and logging information are managed using this number. In addition, the job ticket number is assigned automatically upon opening of the window and from then on, an operator performs operations according to the job ticket number. Here, a changing to the following driver screen in FIG. 22 is done by clicking an OK key 21508, and canceling the setting is done by clicking a cancel key 21509. When pressing the OK key 21508 in a job ticket screen, a job utility screen as in FIG. 22 is displayed. Numeral 21603 is a driver tab and the printing from the color MFP 104 and the black/white MFP 105 connected to the network can be started from the screen.” column 14, line 59-67 thru column 15, lines 1-16).

Takahashi ‘245 does not expressly disclose a print control means for controlling distribution printing; wherein said print control means executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus by analyzing the print document in a first mode; and executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus based on the print instruction information described by the job ticket read by said read means in a second mode.

Takahashi ‘245 discloses print control means for controlling distribution printing (“It is another object of the present invention to provide an image processing apparatus and an image processing system and a control method therefor, an image data processing method, an image forming apparatus and a control method therefor, a controller, and a storage medium storing programs for executing the methods, wherein images are processed depending on printing attributes of the image forming apparatus and printing jobs are distributed to a plurality of

image forming apparatuses depending on the printing attributes to enable a large amount of printing jobs to be efficiently carried out with low running costs..." column 2, lines 16-26); wherein said print control means executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus by analyzing the print document in a first mode (*"The present image forming system, however, can execute cluster printing (a mode where printing data from a source of image data such as the document server 102, the client 103, or the scanner 106 are distributed to a plurality of image forming apparatuses for printing) where a plurality of output devices, that is, the MFP 104 or 105 or the printer 107 simultaneously print and output data based on a command from the document server 102. For example, of plural pages of printing data included in one group, color data can be printed and output by the color MFP 104, while black-and-white data can be printed and output by the monochrome MFP 105."* column 25, lines 20-31); and executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus based on the print instruction information described by the job ticket read by said read means in a second mode (*"On the other hand, if the result of the determination at the step S3204 is negative (No), the process proceeds to a step S3205 to determine whether or not the setting mode contained in the command data obtained from the printing requester such as the client 103 is a delimiter paper inserting mode, based, for example, on the contents of the command data input by the user via the setting item section 1802 on the job ticket screen shown in FIG. 22 or via another section. If the result of the determination is affirmative (Yes), a delimiter paper inserting process is executed (step S3210) to complete the process of the present program. That is, a printing job with color data and black-and-white data mixed therein is split into the color*

data and the black-and-white data, followed by putting together each of the color data and the black-and-white data into a set of continuous color data or black-and-white data. Then, delimiter paper, which is colored so as to easily discriminate between the sets is inserted between the set of continuous black-and-white data and the set of continuous color data, and printing data are output from the output device with the delimiter paper inserted therein (refer to a description provided later with reference to FIG. 33). When the result of the determination at the step S3205 is negative (No), the process proceeds to a step S3206 to determine whether or not the setting mode contained in the command data obtained from the printing requester such as the client 103 is a color page-corresponding paper inserting mode, based, for example, on the contents of the command data input by the user via the setting item section 1802 on the job ticket screen shown in FIG. 22 or via another section. If the result of the determination is negative (No), the process of the present program is immediately terminated. On the other hand, if the result of the determination at the step S3206 is affirmative (Yes), the color page-corresponding paper inserting mode is executed. That is, the printing job with color data and black-and-white data mixed therein is split into the color data and the black-and-white data, and the color data are printed and output by the output device capable of outputting color output data, while as many sheets of recording paper as the color pages are output from the monochrome output device.” column 27, lines 32-67 thru column 28, lines 1-5).

Takahashi ‘999 and Takahashi ‘245 are combinable because they are from same field of endeavor of network printer systems (“To attain the above objects, in a first aspect of the present invention, there is provided an image processing apparatus which selects at least one image forming apparatus from a plurality of image forming apparatuses including at least two types of

image forming apparatuses having different printing attributes..." Takahashi '245 at column 3, lines 30-36).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the printer system as taught by Takahashi '999 by adding a print control means for controlling distribution printing; wherein said print control means executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus by analyzing the print document in a first mode; and executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus based on the print instruction information described by the job ticket read by said read means in a second mode as taught by Takahashi '245.

The motivation for doing so would have been because it is advantageous to prevent inconveniences such as complicated operations required of an operator, generate desired data for the operator, and allow the operator to work more efficiently ("*...it is desirable to prevent inconveniences such as complicated operations required of an operator, generate desired data for the operator, and allow the operator to work more efficiently.*" Takahashi '245 at column 5, lines 1-2).

Therefore, it would have been obvious to combine Takahashi '999 with Takahashi '245 to obtain the invention as specified in claim 1.

Regarding claim 6; Takahashi '999 discloses a print managing method for a print managing apparatus which is connected to plurality of printing apparatuses including a monochromatic printing apparatus and a color printing apparatus via an communication medium,

comprising: (*"Further, MFP's (Multi Functional Peripheral) 104 and 105 are connected to the network 101. Numeral 104 is a color MFP capable of full color scanning, printing and the like. Numeral 105 is a black and white MFP, performing monochromatic scanning, printing and the like. In addition, although not shown, machines other than the above-mentioned MFP's such as scanners, printers, faxes or the like are connected to the network 101."* column 3, lines 9-16); (*"As a mechanism to inform successively the computers 102 and 103 side, on the information and the status of the MFP's 104 and 105, the MFP's 104 and 105 respectively are provided with communication means which allows data exchange with the computers 102 and 103 through the network 101. Moreover, the computers 102 and 103 have utility softwares which function by receiving the information such that the MFP's 104 and 105 can be managed by the computers 102 and 103."* column 3, lines 23-31); a reading step of reading a job ticket which describes print instruction information for a print document to be printed (*"The utility software is a program which can be read by the computers 103 and 102 and is recorded on hard disks, CD-ROMs or floppy disks, accessible to the computers 103 and 102. Numeral 21502 is called a title bar and is used to show the level or the title of the current window. Numeral 21503 is called a tab and is arranged according to its type, allowing to watch necessary information or select necessary information. Numeral 21504 is a job ticket number and the status of the series of operations to be started, the progress of its own job and logging information are managed using this number. In addition, the job ticket number is assigned automatically upon opening of the window and from then on, an operator performs operations according to the job ticket number. Here, a changing to the following driver screen in FIG. 22 is done by clicking an OK key 21508, and canceling the setting is done by clicking a cancel key 21509. When pressing the OK key*

21508 in a job ticket screen, a job utility screen as in FIG. 22 is displayed. Numeral 21603 is a driver tab and the printing from the color MFP 104 and the black/white MFP 105 connected to the network can be started from the screen.” column 14, line 59-67 thru column 15, lines 1-16).

Takahashi '999 does not expressly disclose a print control means for controlling distribution printing; wherein said print control means executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus by analyzing the print document in a first mode; and executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus based on the print instruction information described by the job ticket read by said read means in a second mode.

Takahashi '245 discloses print control step for controlling distribution printing (*“It is another object of the present invention to provide an image processing apparatus and an image processing system and a control method therefor, an image data processing method, an image forming apparatus and a control method therefor, a controller, and a storage medium storing programs for executing the methods, wherein images are processed depending on printing attributes of the image forming apparatus and printing jobs are distributed to a plurality of image forming apparatuses depending on the printing attributes to enable a large amount of printing jobs to be efficiently carried out with low running costs...”* column 2, lines 16-26); wherein said print control step executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus by analyzing the print document in a first mode (*“The present image forming system, however, can execute cluster printing (a mode where printing data from a source of image data such as the document server*

102, the client 103, or the scanner 106 are distributed to a plurality of image forming apparatuses for printing) where a plurality of output devices, that is, the MFP 104 or 105 or the printer 107 simultaneously print and output data based on a command from the document server 102. For example, of plural pages of printing data included in one group, color data can be printed and output by the color MFP 104, while black-and-white data can be printed and output by the monochrome MFP 105." column 25, lines 20-31); and executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus based on the print instruction information described by the job ticket read by said read means in a second mode ("On the other hand, if the result of the determination at the step S3204 is negative (No), the process proceeds to a step S3205 to determine whether or not the setting mode contained in the command data obtained from the printing requester such as the client 103 is a delimiter paper inserting mode, based, for example, on the contents of the command data input by the user via the setting item section 1802 on the job ticket screen shown in FIG. 22 or via another section. If the result of the determination is affirmative (Yes), a delimiter paper inserting process is executed (step S3210) to complete the process of the present program. That is, a printing job with color data and black-and-white data mixed therein is split into the color data and the black-and-white data, followed by putting together each of the color data and the black-and-white data into a set of continuous color data or black-and-white data. Then, delimiter paper, which is colored so as to easily discriminate between the sets is inserted between the set of continuous black-and-white data and the set of continuous color data, and printing data are output from the output device with the delimiter paper inserted therein (refer to a description provided later with reference to FIG. 33). When the result of the determination at

the step S3205 is negative (No), the process proceeds to a step S3206 to determine whether or not the setting mode contained in the command data obtained from the printing requester such as the client 103 is a color page-corresponding paper inserting mode, based, for example, on the contents of the command data input by the user via the setting item section 1802 on the job ticket screen shown in FIG. 22 or via another section. If the result of the determination is negative (No), the process of the present program is immediately terminated. On the other hand, if the result of the determination at the step S3206 is affirmative (Yes), the color page-corresponding paper inserting mode is executed. That is, the printing job with color data and black-and-white data mixed therein is split into the color data and the black-and-white data, and the color data are printed and output by the output device capable of outputting color output data, while as many sheets of recording paper as the color pages are output from the monochrome output device.” column 27, lines 32-67 thru column 28, lines 1-5).

Takahashi ‘999 and Takahashi ‘245 are combinable because they are from same field of endeavor of network printer systems (“*To attain the above objects, in a first aspect of the present invention, there is provided an image processing apparatus which selects at least one image forming apparatus from a plurality of image forming apparatuses including at least two types of image forming apparatuses having different printing attributes...*” Takahashi ‘245 at column 3, lines 30-36).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the printer system as taught by Takahashi ‘999 by adding a print control means for controlling distribution printing; wherein said print control means executes the distribution printing of the print document through the monochromatic printing apparatus and the color

printing apparatus by analyzing the print document in a first mode; and executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus based on the print instruction information described by the job ticket read by said read means in a second mode as taught by Takahashi '245.

The motivation for doing so would have been because it is advantageous to prevent inconveniences such as complicated operations required of an operator, generate desired data for the operator, and allow the operator to work more efficiently (*"...it is desirable to prevent inconveniences such as complicated operations required of an operator, generate desired data for the operator, and allow the operator to work more efficiently."* Takahashi '245 at column 5, lines 1-2).

Therefore, it would have been obvious to combine Takahashi '999 with Takahashi '245 to obtain the invention as specified in claim 6.

Regarding claim 17; Takahashi '999 discloses a print system including a print managing apparatus and a plurality of printing apparatuses including a monochromatic printing apparatus and a color printing apparatus connected via a communication medium, comprising (*"Further, MFP's (Multi Functional Peripheral) 104 and 105 are connected to the network 101. Numeral 104 is a color MFP capable of full color scanning, printing and the like. Numeral 105 is a black and white MFP, performing monochromatic scanning, printing and the like. In addition, although not shown, machines other than the above-mentioned MFP's such as scanners, printers, faxes or the like are connected to the network 101."* column 3, lines 9-16); (*"As a mechanism to inform successively the computers 102 and 103 side, on the information and the*

status of the MFP's 104 and 105, the MFP's 104 and 105 respectively are provided with communication means which allows data exchange with the computers 102 and 103 through the network 101. Moreover, the computers 102 and 103 have utility softwares which function by receiving the information such that the MFP's 104 and 105 can be managed by the computers 102 and 103.” column 3, lines 23-31); read means for reading a job ticket which describes print instruction information for a print document to be printed (“The utility software is a program which can be read by the computers 103 and 102 and is recorded on hard disks, CD-ROMs or floppy disks, accessible to the computers 103 and 102. Numeral 21502 is called a title bar and is used to show the level or the title of the current window. Numeral 21503 is called a tab and is arranged according to its type, allowing to watch necessary information or select necessary information. Numeral 21504 is a job ticket number and the status of the series of operations to be started, the progress of its own job and logging information are managed using this number. In addition, the job ticket number is assigned automatically upon opening of the window and from then on, an operator performs operations according to the job ticket number. Here, a changing to the following driver screen in FIG. 22 is done by clicking an OK key 21508, and canceling the setting is done by clicking a cancel key 21509. When pressing the OK key 21508 in a job ticket screen, a job utility screen as in FIG. 22 is displayed. Numeral 21603 is a driver tab and the printing from the color MFP 104 and the black/white MFP 105 connected to the network can be started from the screen.” column 14, line 59-67 thru column 15, lines 1-16).

Takahashi '999 does not expressly disclose a print managing means for managing distribution printing; discloses wherein said print managing means executes the distribution printing of the print document through the monochromatic printing apparatus and the color

printing apparatus by analyzing the print document in a first mode; and executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus based on the print instruction information described by the job ticket read by said read means in a second mode.

Takahashi '245 discloses a print managing means for managing distribution printing (*"It is another object of the present invention to provide an image processing apparatus and an image processing system and a control method therefor, an image data processing method, an image forming apparatus and a control method therefor, a controller, and a storage medium storing programs for executing the methods, wherein images are processed depending on printing attributes of the image forming apparatus and printing jobs are distributed to a plurality of image forming apparatuses depending on the printing attributes to enable a large amount of printing jobs to be efficiently carried out with low running costs..."* column 2, lines 16-26); wherein said print managing means executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus by analyzing the print document in a first mode (*"The present image forming system, however, can execute cluster printing (a mode where printing data from a source of image data such as the document server 102, the client 103, or the scanner 106 are distributed to a plurality of image forming apparatuses for printing) where a plurality of output devices, that is, the MFP 104 or 105 or the printer 107 simultaneously print and output data based on a command from the document server 102. For example, of plural pages of printing data included in one group, color data can be printed and output by the color MFP 104, while black-and-white data can be printed and output by the monochrome MFP 105."* column 25, lines 20-31); and executes the

distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus based on the print instruction information described by the job ticket read by said read means in a second mode (*"On the other hand, if the result of the determination at the step S3204 is negative (No), the process proceeds to a step S3205 to determine whether or not the setting mode contained in the command data obtained from the printing requester such as the client 103 is a delimiter paper inserting mode, based, for example, on the contents of the command data input by the user via the setting item section 1802 on the job ticket screen shown in FIG. 22 or via another section. If the result of the determination is affirmative (Yes), a delimiter paper inserting process is executed (step S3210) to complete the process of the present program. That is, a printing job with color data and black-and-white data mixed therein is split into the color data and the black-and-white data, followed by putting together each of the color data and the black-and-white data into a set of continuous color data or black-and-white data. Then, delimiter paper, which is colored so as to easily discriminate between the sets is inserted between the set of continuous black-and-white data and the set of continuous color data, and printing data are output from the output device with the delimiter paper inserted therein (refer to a description provided later with reference to FIG. 33). When the result of the determination at the step S3205 is negative (No), the process proceeds to a step S3206 to determine whether or not the setting mode contained in the command data obtained from the printing requester such as the client 103 is a color page-corresponding paper inserting mode, based, for example, on the contents of the command data input by the user via the setting item section 1802 on the job ticket screen shown in FIG. 22 or via another section. If the result of the determination is negative (No), the process of the present program is immediately terminated. On the other hand, if the*

result of the determination at the step S3206 is affirmative (Yes), the color page-corresponding paper inserting mode is executed. That is, the printing job with color data and black-and-white data mixed therein is split into the color data and the black-and-white data, and the color data are printed and output by the output device capable of outputting color output data, while as many sheets of recording paper as the color pages are output from the monochrome output device.” column 27, lines 32-67 thru column 28, lines 1-5).

Takahashi ‘999 and Takahashi ‘245 are combinable because they are from same field of endeavor of network printer systems (“*To attain the above objects, in a first aspect of the present invention, there is provided an image processing apparatus which selects at least one image forming apparatus from a plurality of image forming apparatuses including at least two types of image forming apparatuses having different printing attributes...*” Takahashi ‘245 at column 3, lines 30-36).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the printer system as taught by Takahashi ‘999 by adding a print managing means for managing distribution printing; discloses wherein said print managing means executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus by analyzing the print document in a first mode; and executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus based on the print instruction information described by the job ticket read by said read means in a second mode as taught by Takahashi ‘245.

The motivation for doing so would have been because it is advantageous to prevent inconveniences such as complicated operations required of an operator, generate desired data for

the operator, and allow the operator to work more efficiently (*"...it is desirable to prevent inconveniences such as complicated operations required of an operator, generate desired data for the operator, and allow the operator to work more efficiently."* Takahashi '245 at column 5, lines 1-2).

Therefore, it would have been obvious to combine Takahashi '999 with Takahashi '245 to obtain the invention as specified in claim 17.

Regarding claim 21; Takahashi '999 discloses a print managing method for a print managing apparatus which is connected to a plurality of printing apparatuses including a monochromatic printing apparatus and a color printing apparatus connected via a communication medium, comprising (*"Further, MFP's (Multi Functional Peripheral) 104 and 105 are connected to the network 101. Numeral 104 is a color MFP capable of full color scanning, printing and the like. Numeral 105 is a black and white MFP, performing monochromatic scanning, printing and the like. In addition, although not shown, machines other than the above-mentioned MFP's such as scanners, printers, faxes or the like are connected to the network 101."* column 3, lines 9-16); (*"As a mechanism to inform successively the computers 102 and 103 side, on the information and the status of the MFP's 104 and 105, the MFP's 104 and 105 respectively are provided with communication means which allows data exchange with the computers 102 and 103 through the network 101. Moreover, the computers 102 and 103 have utility softwares which function by receiving the information such that the MFP's 104 and 105 can be managed by the computers 102 and 103."* column 3, lines 23-31); a reading step of reading a job ticket which describes print instruction information for a print document to be

printed ("The utility software is a program which can be read by the computers 103 and 102 and is recorded on hard disks, CD-ROMs or floppy disks, accessible to the computers 103 and 102. Numeral 21502 is called a title bar and is used to show the level or the title of the current window. Numeral 21503 is called a tab and is arranged according to its type, allowing to watch necessary information or select necessary information. Numeral 21504 is a job ticket number and the status of the series of operations to be started, the progress of its own job and logging information are managed using this number. In addition, the job ticket number is assigned automatically upon opening of the window and from then on, an operator performs operations according to the job ticket number. Here, a changing to the following driver screen in FIG. 22 is done by clicking an OK key 21508, and canceling the setting is done by clicking a cancel key 21509. When pressing the OK key 21508 in a job ticket screen, a job utility screen as in FIG. 22 is displayed. Numeral 21603 is a driver tab and the printing from the color MFP 104 and the black/white MFP 105 connected to the network can be started from the screen." column 14, line 59-67 thru column 15, lines 1-16).

Takahashi '999 does not expressly disclose a print managing step of managing distribution printing; wherein said print managing step executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus by analyzing the print document in a first mode; and executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus based on the print instruction information described by the job ticket read in said reading step in a second mode.

Takahashi '245 discloses a print managing step of managing distribution printing (*"It is another object of the present invention to provide an image processing apparatus and an image processing system and a control method therefor, an image data processing method, an image forming apparatus and a control method therefor, a controller, and a storage medium storing programs for executing the methods, wherein images are processed depending on printing attributes of the image forming apparatus and printing jobs are distributed to a plurality of image forming apparatuses depending on the printing attributes to enable a large amount of printing jobs to be efficiently carried out with low running costs..."* column 2, lines 16-26 wherein said print managing step executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus by analyzing the print document in a first mode (*"The present image forming system, however, can execute cluster printing (a mode where printing data from a source of image data such as the document server 102, the client 103, or the scanner 106 are distributed to a plurality of image forming apparatuses for printing) where a plurality of output devices, that is, the MFP 104 or 105 or the printer 107 simultaneously print and output data based on a command from the document server 102. For example, of plural pages of printing data included in one group, color data can be printed and output by the color MFP 104, while black-and-white data can be printed and output by the monochrome MFP 105."* column 25, lines 20-31); and executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus based on the print instruction information described by the job ticket read in said reading step in a second mode (*"On the other hand, if the result of the determination at the step S3204 is negative (No), the process proceeds to a step S3205 to determine whether or not the*

setting mode contained in the command data obtained from the printing requester such as the client 103 is a delimiter paper inserting mode, based, for example, on the contents of the command data input by the user via the setting item section 1802 on the job ticket screen shown in FIG. 22 or via another section. If the result of the determination is affirmative (Yes), a delimiter paper inserting process is executed (step S3210) to complete the process of the present program. That is, a printing job with color data and black-and-white data mixed therein is split into the color data and the black-and-white data, followed by putting together each of the color data and the black-and-white data into a set of continuous color data or black-and-white data. Then, delimiter paper, which is colored so as to easily discriminate between the sets is inserted between the set of continuous black-and-white data and the set of continuous color data, and printing data are output from the output device with the delimiter paper inserted therein (refer to a description provided later with reference to FIG. 33). When the result of the determination at the step S3205 is negative (No), the process proceeds to a step S3206 to determine whether or not the setting mode contained in the command data obtained from the printing requester such as the client 103 is a color page-corresponding paper inserting mode, based, for example, on the contents of the command data input by the user via the setting item section 1802 on the job ticket screen shown in FIG. 22 or via another section. If the result of the determination is negative (No), the process of the present program is immediately terminated. On the other hand, if the result of the determination at the step S3206 is affirmative (Yes), the color page-corresponding paper inserting mode is executed. That is, the printing job with color data and black-and-white data mixed therein is split into the color data and the black-and-white data, and the color data are printed and output by the output device capable of outputting color output data, while as

many sheets of recording paper as the color pages are output from the monochrome output device.” column 27, lines 32-67 thru column 28, lines 1-5).

Takahashi ‘999 and Takahashi ‘245 are combinable because they are from same field of endeavor of network printer systems (*“To attain the above objects, in a first aspect of the present invention, there is provided an image processing apparatus which selects at least one image forming apparatus from a plurality of image forming apparatuses including at least two types of image forming apparatuses having different printing attributes...”* Takahashi ‘245 at column 3, lines 30-36).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the printer system as taught by Takahashi ‘999 by adding a print managing step of managing distribution printing; wherein said print managing step executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus by analyzing the print document in a first mode; and executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus based on the print instruction information described by the job ticket read in said reading step in a second mode as taught by Takahashi ‘245.

The motivation for doing so would have been because it is advantageous to prevent inconveniences such as complicated operations required of an operator, generate desired data for the operator, and allow the operator to work more efficiently (*“...it is desirable to prevent inconveniences such as complicated operations required of an operator, generate desired data for the operator, and allow the operator to work more efficiently.”* Takahashi ‘245 at column 5, lines 1-2).

Therefore, it would have been obvious to combine Takahashi '999 with Takahashi '245 to obtain the invention as specified in claim 21.

Regarding claim 25; Takahashi '999 discloses a computer-readable medium storing a computer program for a print managing method for a print managing apparatus which is connected to a plurality of printing apparatuses including a monochromatic printing apparatus and a color printing apparatus via a communication medium, said program comprising (*"Further, MFP's (Multi Functional Peripheral) 104 and 105 are connected to the network 101. Numeral 104 is a color MFP capable of full color scanning, printing and the like. Numeral 105 is a black and white MFP, performing monochromatic scanning, printing and the like. In addition, although not shown, machines other than the above-mentioned MFP's such as scanners, printers, faxes or the like are connected to the network 101."* column 3, lines 9-16); (*"As a mechanism to inform successively the computers 102 and 103 side, on the information and the status of the MFP's 104 and 105, the MFP's 104 and 105 respectively are provided with communication means which allows data exchange with the computers 102 and 103 through the network 101. Moreover, the computers 102 and 103 have utility softwares which function by receiving the information such that the MFP's 104 and 105 can be managed by the computers 102 and 103."* column 3, lines 23-31); a reading step of reading a job ticket which describes print instruction information for a print document to be printed (*"The utility software is a program which can be read by the computers 103 and 102 and is recorded on hard disks, CD-ROMs or floppy disks, accessible to the computers 103 and 102. Numeral 21502 is called a title bar and is used to show the level or the title of the current window. Numeral 21503 is called a*

tab and is arranged according to its type, allowing to watch necessary information or select necessary information. Numeral 21504 is a job ticket number and the status of the series of operations to be started, the progress of its own job and logging information are managed using this number. In addition, the job ticket number is assigned automatically upon opening of the window and from then on, an operator performs operations according to the job ticket number. Here, a changing to the following driver screen in FIG. 22 is done by clicking an OK key 21508, and canceling the setting is done by clicking a cancel key 21509. When pressing the OK key 21508 in a job ticket screen, a job utility screen as in FIG. 22 is displayed. Numeral 21603 is a driver tab and the printing from the color MFP 104 and the black/white MFP 105 connected to the network can be started from the screen.” column 14, line 59-67 thru column 15, lines 1-16).

Takahashi ‘999 does not expressly disclose a print control step of controlling distribution printing; wherein said print control step executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus by analyzing the print document in a first mode; executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus based on the print instruction information described by the job ticket read in said reading step in a second mode.

Takahashi ‘245 discloses a print control step of controlling distribution printing (“It is another object of the present invention to provide an image processing apparatus and an image processing system and a control method therefor, an image data processing method, an image forming apparatus and a control method therefor, a controller, and a storage medium storing programs for executing the methods, wherein images are processed depending on printing attributes of the image forming apparatus and printing jobs are distributed to a plurality of

image forming apparatuses depending on the printing attributes to enable a large amount of printing jobs to be efficiently carried out with low running costs..." column 2, lines 16-26); wherein said print control step executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus by analyzing the print document in a first mode (*"The present image forming system, however, can execute cluster printing (a mode where printing data from a source of image data such as the document server 102, the client 103, or the scanner 106 are distributed to a plurality of image forming apparatuses for printing) where a plurality of output devices, that is, the MFP 104 or 105 or the printer 107 simultaneously print and output data based on a command from the document server 102. For example, of plural pages of printing data included in one group, color data can be printed and output by the color MFP 104, while black-and-white data can be printed and output by the monochrome MFP 105."* column 25, lines 20-31); executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus based on the print instruction information described by the job ticket read in said reading step in a second mode (*"On the other hand, if the result of the determination at the step S3204 is negative (No), the process proceeds to a step S3205 to determine whether or not the setting mode contained in the command data obtained from the printing requester such as the client 103 is a delimiter paper inserting mode, based, for example, on the contents of the command data input by the user via the setting item section 1802 on the job ticket screen shown in FIG. 22 or via another section. If the result of the determination is affirmative (Yes), a delimiter paper inserting process is executed (step S3210) to complete the process of the present program. That is, a printing job with color data and black-and-white data mixed therein is split into the color data*

and the black-and-white data, followed by putting together each of the color data and the black-and-white data into a set of continuous color data or black-and-white data. Then, delimiter paper, which is colored so as to easily discriminate between the sets is inserted between the set of continuous black-and-white data and the set of continuous color data, and printing data are output from the output device with the delimiter paper inserted therein (refer to a description provided later with reference to FIG. 33). When the result of the determination at the step S3205 is negative (No), the process proceeds to a step S3206 to determine whether or not the setting mode contained in the command data obtained from the printing requester such as the client 103 is a color page-corresponding paper inserting mode, based, for example, on the contents of the command data input by the user via the setting item section 1802 on the job ticket screen shown in FIG. 22 or via another section. If the result of the determination is negative (No), the process of the present program is immediately terminated. On the other hand, if the result of the determination at the step S3206 is affirmative (Yes), the color page-corresponding paper inserting mode is executed. That is, the printing job with color data and black-and-white data mixed therein is split into the color data and the black-and-white data, and the color data are printed and output by the output device capable of outputting color output data, while as many sheets of recording paper as the color pages are output from the monochrome output device.”

column 27, lines 32-67 thru column 28, lines 1-5).

Takahashi '999 and Takahashi '245 are combinable because they are from same field of endeavor of network printer systems (“To attain the above objects, in a first aspect of the present invention, there is provided an image processing apparatus which selects at least one image forming apparatus from a plurality of image forming apparatuses including at least two types of

image forming apparatuses having different printing attributes..." Takahashi '245 at column 3, lines 30-36).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the printer system as taught by Takahashi '999 by adding a print control step of controlling distribution printing; wherein said print control step executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus by analyzing the print document in a first mode; executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus based on the print instruction information described by the job ticket read in said reading step in a second mode as taught by Takahashi '245.

The motivation for doing so would have been because it is advantageous to prevent inconveniences such as complicated operations required of an operator, generate desired data for the operator, and allow the operator to work more efficiently ("*...it is desirable to prevent inconveniences such as complicated operations required of an operator, generate desired data for the operator, and allow the operator to work more efficiently.*" Takahashi '245 at column 5, lines 1-2).

Therefore, it would have been obvious to combine Takahashi '999 with Takahashi '245 to obtain the invention as specified in claim 25.

Regarding claim 26; Takahashi '999 discloses a computer-readable medium storing a computer program for a print system including a print managing apparatus and a plurality of printing apparatuses including a monochromatic printing apparatus and a color printing

apparatus connected via a communication medium, the computer program comprising (*"Further, MFP's (Multi Functional Peripheral) 104 and 105 are connected to the network 101. Numeral 104 is a color MFP capable of full color scanning, printing and the like. Numeral 105 is a black and white MFP, performing monochromatic scanning, printing and the like. In addition, although not shown, machines other than the above-mentioned MFP's such as scanners, printers, faxes or the like are connected to the network 101."* column 3, lines 9-16); (*"As a mechanism to inform successively the computers 102 and 103 side, on the information and the status of the MFP's 104 and 105, the MFP's 104 and 105 respectively are provided with communication means which allows data exchange with the computers 102 and 103 through the network 101. Moreover, the computers 102 and 103 have utility softwares which function by receiving the information such that the MFP's 104 and 105 can be managed by the computers 102 and 103."* column 3, lines 23-31); a reading step of reading a job ticket which describes print instruction information for a print document to be printed (*"The utility software is a program which can be read by the computers 103 and 102 and is recorded on hard disks, CD-ROMs or floppy disks, accessible to the computers 103 and 102. Numeral 21502 is called a title bar and is used to show the level or the title of the current window. Numeral 21503 is called a tab and is arranged according to its type, allowing to watch necessary information or select necessary information. Numeral 21504 is a job ticket number and the status of the series of operations to be started, the progress of its own job and logging information are managed using this number. In addition, the job ticket number is assigned automatically upon opening of the window and from then on, an operator performs operations according to the job ticket number. Here, a changing to the following driver screen in FIG. 22 is done by clicking an OK key 21508,*

and canceling the setting is done by clicking a cancel key 21509. When pressing the OK key 21508 in a job ticket screen, a job utility screen as in FIG. 22 is displayed. Numeral 21603 is a driver tab and the printing from the color MFP 104 and the black/white MFP 105 connected to the network can be started from the screen.” column 14, line 59-67 thru column 15, lines 1-16).

Takahashi ‘999 does not expressly disclose a print managing step of managing distribution printing; wherein said print managing step executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus by analyzing the print document in a first mode; executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus based on the print instruction information described by the job ticket read in said reading step in a second mode.

Takahashi ‘245 discloses a print managing step of managing distribution printing (*“It is another object of the present invention to provide an image processing apparatus and an image processing system and a control method therefor, an image data processing method, an image forming apparatus and a control method therefor, a controller, and a storage medium storing programs for executing the methods, wherein images are processed depending on printing attributes of the image forming apparatus and printing jobs are distributed to a plurality of image forming apparatuses depending on the printing attributes to enable a large amount of printing jobs to be efficiently carried out with low running costs...”* column 2, lines 16-26); wherein said print managing step executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus by analyzing the print document in a first mode (*“The present image forming system, however, can execute cluster*

printing (a mode where printing data from a source of image data such as the document server 102, the client 103, or the scanner 106 are distributed to a plurality of image forming apparatuses for printing) where a plurality of output devices, that is, the MFP 104 or 105 or the printer 107 simultaneously print and output data based on a command from the document server 102. For example, of plural pages of printing data included in one group, color data can be printed and output by the color MFP 104, while black-and-white data can be printed and output by the monochrome MFP 105.” column 25, lines 20-31); executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus based on the print instruction information described by the job ticket read in said reading step in a second mode (“On the other hand, if the result of the determination at the step S3204 is negative (No), the process proceeds to a step S3205 to determine whether or not the setting mode contained in the command data obtained from the printing requester such as the client 103 is a delimiter paper inserting mode, based, for example, on the contents of the command data input by the user via the setting item section 1802 on the job ticket screen shown in FIG. 22 or via another section. If the result of the determination is affirmative (Yes), a delimiter paper inserting process is executed (step S3210) to complete the process of the present program. That is, a printing job with color data and black-and-white data mixed therein is split into the color data and the black-and-white data, followed by putting together each of the color data and the black-and-white data into a set of continuous color data or black-and-white data. Then, delimiter paper, which is colored so as to easily discriminate between the sets is inserted between the set of continuous black-and-white data and the set of continuous color data, and printing data are output from the output device with the delimiter paper inserted therein (refer to a description

provided later with reference to FIG. 33). When the result of the determination at the step S3205 is negative (No), the process proceeds to a step S3206 to determine whether or not the setting mode contained in the command data obtained from the printing requester such as the client 103 is a color page-corresponding paper inserting mode, based, for example, on the contents of the command data input by the user via the setting item section 1802 on the job ticket screen shown in FIG. 22 or via another section. If the result of the determination is negative (No), the process of the present program is immediately terminated. On the other hand, if the result of the determination at the step S3206 is affirmative (Yes), the color page-corresponding paper inserting mode is executed. That is, the printing job with color data and black-and-white data mixed therein is split into the color data and the black-and-white data, and the color data are printed and output by the output device capable of outputting color output data, while as many sheets of recording paper as the color pages are output from the monochrome output device.” column 27, lines 32-67 thru column 28, lines 1-5).

Takahashi ‘999 and Takahashi ‘245 are combinable because they are from same field of endeavor of network printer systems (“*To attain the above objects, in a first aspect of the present invention, there is provided an image processing apparatus which selects at least one image forming apparatus from a plurality of image forming apparatuses including at least two types of image forming apparatuses having different printing attributes...*” Takahashi ‘245 at column 3, lines 30-36).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the printer system as taught by Takahashi ‘999 by adding a print managing step of managing distribution printing; wherein said print managing step executes the distribution

printing of the print document through the monochromatic printing apparatus and the color printing apparatus by analyzing the print document in a first mode; executes the distribution printing of the print document through the monochromatic printing apparatus and the color printing apparatus based on the print instruction information described by the job ticket read in said reading step in a second mode as taught by Takahashi '245.

The motivation for doing so would have been because it is advantageous to prevent inconveniences such as complicated operations required of an operator, generate desired data for the operator, and allow the operator to work more efficiently (*"...it is desirable to prevent inconveniences such as complicated operations required of an operator, generate desired data for the operator, and allow the operator to work more efficiently."* Takahashi '245 at column 5, lines 1-2).

Therefore, it would have been obvious to combine Takahashi '999 with Takahashi '245 to obtain the invention as specified in claim 26.

5. **Claims 5, 16, 18, 19, 22 & 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi '999 and Takahashi '245 as applied to claim 1 above, and further in view of Hertling (US 6,874,034 B1 hereinafter, Hertling, '034).

Regarding claim 5: Takahashi '999 and Takahashi '245 does not expressly disclose wherein the print instruction information described by the job ticket is described by a markup language.

Hertling '034 discloses wherein the print instruction information described by the job ticket is described by a markup language (*"Turning now to FIGS. 6 and 7, the print job ticket*

processing logic 500 will be described in greater detail. Starting at block 502, the print job ticket processing logic 500 receives a print job ticket 303. Next, the print job ticket 303 is parsed, or decoded, in block 504 to determine the content of the print job ticket 303. As is known in the art, the print job ticket 303 can contain a plurality of fields. Each field respectively contains data readable by the queue server 109. The data can be in a suitable format, such as extensible markup language (XML) or simply a binary word that represents an item of information related to the print job. The print job ticket processing logic 500 is programmed to identify the data contained in each.” column 9, lines 62-67 thru column 10, lines 1-7).

Takahashi ‘999 and Takahashi ‘245 are combinable with Hertling ‘034 because they are from same field of endeavor of network printer systems (“*The present invention is generally related to the field of network printing and, more particularly, is related to a system and method for network printing using a peer hybrid printing protocol.*” Hertling ‘034 at column 1, lines 5-8).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the printer system as taught by Takahashi ‘999 and Takahashi ‘245 by adding wherein the print instruction information described by the job ticket is described by a markup language as taught by Hertling ‘034.

The motivation for doing so would have been because it is advantageous for the reason that the peer-to-peer approach does not facilitate centralized printer control, queuing or prioritizing print jobs, tracking printer or job statistics, and the like (“*When the print server is ready to receive data, the operating system in the client transmits the print job to the print server. The print server then applies the print job to the printer for printing. Although, the peer-*

to-peer printing approach only requires the entire document to be transmitted on the network once, the peer-to-peer approach does not facilitate centralized printer control, queuing or prioritizing print jobs, tracking printer or job statistics, and the like.” Hertling ‘034 at column 2, lines 7-14).

Therefore, it would have been obvious to combine Takahashi ‘999 and Takahashi ‘245 with Hertling ‘034 to obtain the invention as specified in claim 1.

Regarding claim 16; Hertling ‘034 discloses wherein the print instruction information described by the job ticket is described by a markup language (*“Turning now to FIGS. 6 and 7, the print job ticket processing logic 500 will be described in greater detail. Starting at block 502, the print job ticket processing logic 500 receives a print job ticket 303. Next, the print job ticket 303 is parsed, or decoded, in block 504 to determine the content of the print job ticket 303. As is known in the art, the print job ticket 303 can contain a plurality of fields. Each field respectively contains data readable by the queue server 109. The data can be in a suitable format, such as extensible markup language (XML) or simply a binary word that represents an item of information related to the print job. The print job ticket processing logic 500 is programmed to identify the data contained in each.”* column 9, lines 62-67 thru column 10, lines 1-7).

Regarding claim 18; Hertling ‘034 discloses wherein the job ticket and at least one of the print documents is formed as a print job (*“With to reference to FIG. 2, shown is a block diagram of the printing network 100 that depicts a printing protocol 300 according to an embodiment of the present invention. The printing protocol 300 provides for communication*

between the various devices of the printing network 100. In particular, the printing protocol 300 includes a print job ticket 303, a printer polling message 304, a printer response message 306, a request for full print job 309, a full print job 313, and a printer idle signal 316. Each of these data communications are employed as part of the printing protocol 300 to cause a document that resides in the client 106 to be printed on the printer 116.” column 5, lines 1-12).

Regarding claim 19; Hertling ‘034 discloses further comprising a print client, wherein the print client transmits the print job to the print managing apparatus (“*The client 106 then generates a print job ticket 303 that includes the address of the client 106 on the network 103, the name or identification of the full print job, and any other pertinent information such as the number of pages to be printed, etc. The client 106 then transmits the print job ticket 303 to the queue server 109. The queue server 109 places the print job ticket 303 in a printing queue maintained in the queue server 109. The queue server 109 then transmits a printer polling message 304 to the print server 113 to determine if the printer 116 is available to print a document. The print server 113 responds with the printer response message 306 that informs the queue server 109 that the printer 116 is busy printing or is available. If the printer 116 is occupied with another print job, the queue server 109 waits for a period of time and then retransmits the printer polling message 304. If the printer 116 is available, the queue server 109 then transmits the print job ticket 303 to the print server 113.*” column 5, lines 24-41).

Regarding claim 22; Hertling ‘034 discloses wherein the job ticket and at least one of the print documents is formed as a print job (“*With to reference to FIG. 2, shown is a block*

diagram of the printing network 100 that depicts a printing protocol 300 according to an embodiment of the present invention. The printing protocol 300 provides for communication between the various devices of the printing network 100. In particular, the printing protocol 300 includes a print job ticket 303, a printer polling message 304, a printer response message 306, a request for full print job 309, a full print job 313, and a printer idle signal 316. Each of these data communications are employed as part of the printing protocol 300 to cause a document that resides in the client 106 to be printed on the printer 116.” column 5, lines 1-12).

Regarding claim 23; Hertling ‘034 discloses wherein the print client transmits the print job to the print managing apparatus (“*The client 106 then generates a print job ticket 303 that includes the address of the client 106 on the network 103, the name or identification of the full print job, and any other pertinent information such as the number of pages to be printed, etc. The client 106 then transmits the print job ticket 303 to the queue server 109. The queue server 109 places the print job ticket 303 in a printing queue maintained in the queue server 109. The queue server 109 then transmits a printer polling message 304 to the print server 113 to determine if the printer 116 is available to print a document. The print server 113 responds with the printer response message 306 that informs the queue server 109 that the printer 116 is busy printing or is available. If the printer 116 is occupied with another print job, the queue server 109 waits for a period of time and then retransmits the printer polling message 304. If the printer 116 is available, the queue server 109 then transmits the print job ticket 303 to the print server 113.*” column 5, lines 24-41).

Regarding claim 22; Hertling '034 discloses wherein the job ticket and at least one of the print documents is formed as a print job (*"With to reference to FIG. 2, shown is a block diagram of the printing network 100 that depicts a printing protocol 300 according to an embodiment of the present invention. The printing protocol 300 provides for communication between the various devices of the printing network 100. In particular, the printing protocol 300 includes a print job ticket 303, a printer polling message 304, a printer response message 306, a request for full print job 309, a full print job 313, and a printer idle signal 316. Each of these data communications are employed as part of the printing protocol 300 to cause a document that resides in the client 106 to be printed on the printer 116."* column 5, lines 1-12).

Regarding claim 23; Hertling '034 discloses wherein the print client transmits the print job to the print managing apparatus (*"The client 106 then generates a print job ticket 303 that includes the address of the client 106 on the network 103, the name or identification of the full print job, and any other pertinent information such as the number of pages to be printed, etc. The client 106 then transmits the print job ticket 303 to the queue server 109. The queue server 109 places the print job ticket 303 in a printing queue maintained in the queue server 109. The queue server 109 then transmits a printer polling message 304 to the print server 113 to determine if the printer 116 is available to print a document. The print server 113 responds with the printer response message 306 that informs the queue server 109 that the printer 116 is busy printing or is available. If the printer 116 is occupied with another print job, the queue server 109 waits for a period of time and then retransmits the printer polling message 304. If the printer 116 is*

available, the queue server 109 then transmits the print job ticket 303 to the print server 113."
column 5, lines 24-41).

6. **Claims 20 & 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi '999 and Takahashi '245 as applied to claim 17 above, and further in view of Takahashi '245.

Regarding claim 20; Takahashi '999 and Takahashi '245 does not expressly disclose wherein the job ticket is reusable, and at least one of output layout information, additional information and monochromatic/color information included in the print instruction information described by the job ticket is changed to reuse the job ticket.

Takahashi '245 discloses wherein the job ticket is reusable, and at least one of output layout information, additional information and monochromatic/color information included in the print instruction information described by the job ticket is changed to reuse the job ticket ("*The user checks the setting contents and if they are correct, operates an OK key 1804 to transmit the printing job (including command data indicative of commands input by the user via the operation screens shown in FIGS. 20, 21, 22, and other figures, image data to be printed, and other data) directly to the document server 102. On receiving the printing job, the document server 102 controls the MFPs 104 and 105 to perform operations based on the commands from the user. To cancel the setting contents of the job ticket, the user can operate the cancel key 1805 to stop or suspend the process. The user can also make various settings for clustering, described later, as well as other settings (including various operation modes described later with reference*

to FIGS. 27, 28, 33, 35, 36, and other figures), using operation screens such as those shown in FIGS. 20, 21, and 22.” column 23, lines 53-67).

Takahashi ‘999 and Takahashi ‘245 are combinable with Takahashi ‘245 because they are from same field of endeavor of network printer systems (*“To attain the above objects, in a first aspect of the present invention, there is provided an image processing apparatus which selects at least one image forming apparatus from a plurality of image forming apparatuses including at least two types of image forming apparatuses having different printing attributes...”* Takahashi ‘245 at column 3, lines 30-36).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the printer system as taught by Takahashi ‘999 and Takahashi ‘245 by adding wherein the job ticket is reusable, and at least one of output layout information, additional information and monochromatic/color information included in the print instruction information described by the job ticket is changed to reuse the job ticket as taught by Takahashi ‘245.

The motivation for doing so would have been because it is advantageous to prevent inconveniences such as complicated operations required of an operator, generate desired data for the operator, and allow the operator to work more efficiently (*“...it is desirable to prevent inconveniences such as complicated operations required of an operator, generate desired data for the operator, and allow the operator to work more efficiently.”* Takahashi ‘245 at column 5, lines 1-2).

Therefore, it would have been obvious to combine Takahashi ‘999 and Takahashi ‘245 with Takahashi ‘245 to obtain the invention as specified in claim 17.

Regarding claim 24; Takahashi '245 discloses the job ticket is reusable, and at least one of output layout information, additional information and monochromatic/color information included in the print instruction information described by the job ticket is changed to reuse the job ticket (*"The user checks the setting contents and if they are correct, operates an OK key 1804 to transmit the printing job (including command data indicative of commands input by the user via the operation screens shown in FIGS. 20, 21, 22, and other figures, image data to be printed, and other data) directly to the document server 102. On receiving the printing job, the document server 102 controls the MFPs 104 and 105 to perform operations based on the commands from the user. To cancel the setting contents of the job ticket, the user can operate the cancel key 1805 to stop or suspend the process. The user can also make various settings for clustering, described later, as well as other settings (including various operation modes described later with reference to FIGS. 27, 28, 33, 35, 36, and other figures), using operation screens such as those shown in FIGS. 20, 21, and 22."* column 23, lines 53-67).

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARCUS T. RILEY whose telephone number is (571)270-1581. The examiner can normally be reached on Monday - Friday, 7:30-5:00, est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler L. Haskins can be reached on 571-272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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